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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/766,492	01/28/2004	Jeffrey K. Daniel	123018.0013.000	3502

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EXAMINER

WILLIAMS, THOMAS J

ART UNIT	PAPER NUMBER
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3683

DATE MAILED: 04/05/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/766,492

Applicant(s)

DANIEL, JEFFREY K.

Examiner

Thomas J. Williams

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-30 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-7, 11-16 and 18-30 is/are rejected.
- 7) ☒ Claim(s) 8-10 and 17 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 28 January 2004 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. ____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date ____. | 6) <input type="checkbox"/> Other: ____. |

DETAILED ACTION

1. Acknowledgment is made in the receipt of the oath filed August 23, 2004.

Drawings

2. The drawings are objected to because each figure showing a different tapering embodiment should have a new number, the figures should be renumbered as 3a and 3b, the disclosure must be corrected. Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.
3. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the subject matter of claim 15 (the taper depth decreasing towards the midpoint), claim 19, claim 21 and claim 22 must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as “amended.” If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either “Replacement Sheet” or “New Sheet” pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Specification

4. The specification is objected to as failing to provide proper antecedent basis for the claimed subject matter. See 37 CFR 1.75(d)(1) and MPEP § 608.01(o). Correction of the following is required: the subject matter of claim 15 does not appear in the disclosure, the subject matter should be cancelled.

Claim Rejections - 35 USC § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

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(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

6. Claims 1-3, 6, 7, 11-14, 16 and 20 are rejected under 35 U.S.C. 102(b) as being anticipated by US 3,667,578 to Johnson.

Re-claim 1, Johnson discloses a driveline comprising: a drive gear motor 10; a ball ramp brake; a gearbox is coupled to the ball ramp brake. The gearbox is broadly interpreted as the interconnection between two gears, such as gear 33 and the load gear.

Re-claims 2 and 3, see figure 1.

Re-claim 6, the device of Johnson is capable of being attached to any type of load, such as a wheel hub having a wheel drive gearbox. It is noted that the applicant has stated in the disclosure that the recited structure is known in the art.

Re-claim 7, the ball ramp brake comprises a motor drive shaft A having a motor drive plate 18, a brake drive shaft B has brake drive plate 34, a ball ramp plate 22 is disposed between the brake plate and the motor plate, a groove is formed in each respective plate.

Re-claims 11, 12, 14 and 16, Johnson discloses that the grooves have a conical shape, see column 1 line 57.

Re-claim 20, gear 33 is at a right angle to the shaft.

7. Claim 1, 3, 4, 6 and 24-26 are rejected under 35 U.S.C. 102(b) as being anticipated by US 5,299,666 to Lang et al.

Re-claims 1, 3, 4, 24-26, Lang et al. disclose a driveline comprising: a drive gear motor (connected to 20); a ball ramp brake; a gearbox (seen as 34 and 35); an enclosure surrounds the brake, the gear box and provides a level of sealing (due in part to the bearing elements 16 and 18).

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Re-claim 6, the device of Lang et al. is capable of being attached to a wheel hub and wheel drive gearbox, as known in the art.

8. Claims 1, 3-6, 20, 23, 24, and 27-30 are rejected under 35 U.S.C. 103(a) as being unpatentable over US 5,944,148 to Bae et al.

Re-claims 1, 3, 4, 20, 24-27, Bae et al. disclose a driveline comprising: a drive gear motor (connected at input gear 40); a ball ramp brake; a gearbox (interpreted as input gear 40 meshing with a gear from the motor, right angle gear); an enclosure surrounds the brake; a lubricant substantially fills the enclosure (column 5 lines 52-53); the enclosure is sealed.

Re-claims 6 and 28, the device of Lang et al. is capable of being attached to a wheel hub and wheel drive gearbox, as known in the art.

Re-claim 29, the ramp brake is bi-directional, see figure 9.

Re-claim 30, the gearbox is interpreted as being a high efficiency gearbox, since the gear set is similar to the gear set illustrated in the instant invention.

Claim Rejections - 35 USC § 103

9. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

10. Claims 13 and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Johnson in view of US 4,909,363 to Trommer.

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Johnson teaches a plurality of grooves that increase in depth and then decrease in depth, i.e. conical in shape. However, Johnson fails to teach the grooves decreasing in depth from a first end to a second end, with a decreasing depth at a mid-point. Trommer teaches a ramp brake utilizing either conical shaped grooves (figure 2, similar to Johnson) or grooves having a decreasing depth from a first end to a second end, with a decreasing depth at a mid-point. Trommer teaches that each ball ramp functions in a similar manner. It would have been obvious to one of ordinary skill in the art to have provided the ramp brake of Johnson with grooves of decreasing depth as taught by Trommer, thus providing the artisan with an alternative means of actuating the ramp brake mechanism.

11. Claims 18, 19, 21 and 22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Johnson.

Re-claims 18, 19, 21 and 22, Johnson fails to teach the various gear setups as recited in the aforementioned claims. The examiner takes official notice that such gear structures are known in the art, as supported by the applicant's disclosure (see paragraph 23). It would have been obvious to one of ordinary skill in the art as a matter of design choice to have utilized one of an involute gear, a planetary gear, a hypoid gear or combination thereof in the device of Johnson since the applicant has not disclosed that using each of the recited gears solves any stated problem or is for any particular purpose and it appears that each of the recited gears would have performed equally well in the device of Johnson.

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Allowable Subject Matter

12. Claims 8-10 and 17 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

13. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Meis et al. teach the common structure of an irrigation system. Klopfenstein et al. and Paris each teach a driveline with a ball ramp brake.

14. Any inquiries concerning this communication or earlier communications from the examiner should be directed to Thomas Williams whose telephone number is (703) 305-1346 (after April 2005 the new telephone number will be 571-272-7128). The examiner can normally be reached on Monday-Thursday from 6:30 AM to 4:00 PM. The examiner can also be reached on alternate Fridays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Dave Bucci, can be reached at (703) 308-3668 (after April 11, 2005 the new telephone number will be 571-272-7099). The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-1113.

TJW

March 28, 2005

THOMAS WILLIAMS
PATENT EXAMINER

Thomas Williams
AU 3683
3-28-05